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## **Masalah yg terus ada .....**

- **Populasi dan tekanan terhadap lahan**
- **Deforestasi dan degradasi**
- **Kemiskinan masih tinggi**
- **Ketidakadilan akses**

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## Hal-hal yang nyata ....

- Persaingan sektor: keterlanjuran
- Perubahan iklim → kinerja sektor pertanian
- Globalisasi → yang lemah tertekan dan kalah
- Biaya semakin tinggi, investasi kurang menarik

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## Agroforestry Sebagai Solusi ..... ?

Optimalisasi  
penggunaan lahan antar  
ruang dan waktu

Aneka produksi barang  
dan jasa

Teknik produksi dan  
konservasi yang telah  
ada

Penghormatan pada hak-  
hak yang telah ada

Masalah aktual dan yang terus  
ada:

- Deforestasi dan degradasi
- Keterjangkauan pangan dan energi
- Perubahan iklim
- Kemiskinan
- Investasi yg kurang menarik
- Populasi, Tekanan pd Lahan dan SDA
- Persaingan antar sektor
- Globalisasi dan
- Ketidakeadilan akses

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## **Arah AGROFORESTRY**

### **Pohon dalam lahan pertanian:**

Dari tahap subsiten → subsiten dengan jaring pengaman → pertanian pra-komersial → pertanian yang lebih menguntungkan → pertanian yang lestari

### **Budidaya non hutan pada areal/kawasan hutan:**

Dari tahap pemanfaatan potensi sosial utk pembangunan hutan tanaman → pemberian akses produksi kepada masyarakat → keuntungan bersama bisnis hutan dan pangan

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## **Mengapa AF Masih Sulit Berkembang**

- Keberpihakan yang masih kurang
- Keraguan: teknis/finansial/pasar maupun sosial
- Tidak adanya ketentuan hukum yang mengikat
- Tujuan jangka pendek vs jangka panjang

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## Upaya Strategis

### Debottlenecking:

- Kebijakan dan peraturan yang menjadi penghalang
- Keberpihakan pada masyarakat
- Kontrak-kontrak lama yang menjadi penghambat

### Creating enabling condition:

- Kebijakan yang mendukung sisi legal, teknis, dan finansial
- Peningkatan kapasitas: masyarakat, pendamping, pemerintah, lembaga terkait
- Pendampingan masyarakat
- Dukungan pasar

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## LITBANG AF ke depan

- Berorientasi pada hasil langsung dan bermanfaat
- Menjawab masalah: a) kemiskinan, b) ketahanan pangan, air dan energi, c) ketidakadilan akses ke SDA, d) pemulihan lingkungan dan SDA, e) mitigasi dan adaptasi perubahan iklim
- Bersifat *action research*: a) *participatory* dan transparan, b) bersifat terapan, c) *learning process*

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## Perubahan Paradigma Pengelolaan Sumber Daya Alam

### Hutan Produksi:

- Optimalisasi penggunaan lahan: kendala biofisik, sosial dan pasar
- Hutan sebagai *production supporting system*
- *Multi-actors* dan *bundle of rights (tenures)*

### Lahan Pertanian:

- Bukan maksimisasi tapi optimalisasi produk secara lestari
- *Market and profit oriented*

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## PENUTUP

### Indonesia saat ini (Dino Pati Jalal, 2013) :

- *major democracy,*
- *emerging economy,*
- *pivotal state,*
- *next Asian Giant*
- *environmental power*

**Agroforestry akan menyumbang pada prestasi ini**



21 May 2013 -- Malang Seminar Nasional Agroforestri

## **Agroforestry as buffer to livelihoods in a green economy: reflections from 20 years ICRAF Indonesia**




*Meine van Noordwijk – with thanks to Sonya Dewi,  
Beria Leimona, Betha Lusiana, Atiek Widayati, Ujjwal Pradhan dll*

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## **Agroforestry as buffer to livelihoods in a green economy: reflections from 20 years ICRAF Indonesia**

- 100 // 35 // 20 year celebrations

- AF = Farmers + Trees + Forests
    - ➔ What happened to Indonesia's forests and AF?
  - A global research agenda on ecological intensification, agroforestry & buffer are key elements
  - Landscapes as institutional interface
  - Climate change increases need for buffering
  - How to green the Indonesian economy? 
-



**Agroforestry**  
a decade of development

Edited by  
H.A. Stepp  
and  
P.K.R. Nair

**ICRAF SEAsia**  
Celebrating 20 years World Agroforestry Centre in Indonesia, Philippines, China, Viet Nam, Thailand

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My profile: <http://scholar.google.com/citations?hl=en&user=KfXtvFUAAAAJ>

**World Agroforestry Centre**

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h-index	66
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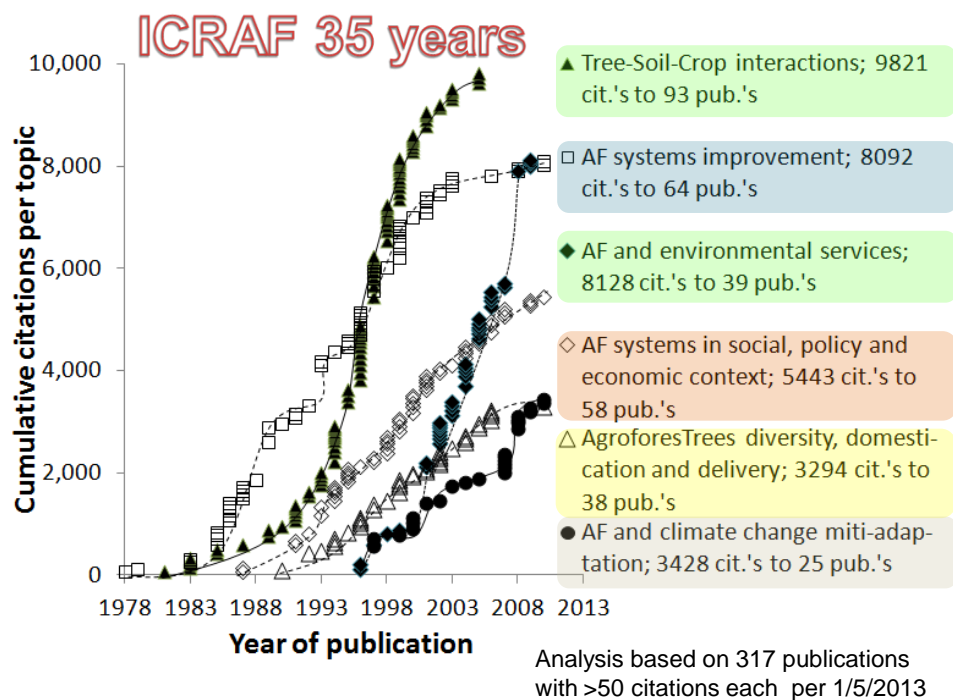
**ICRAF thirtyfive years**  
CGIAR World Agroforestry Centre (ICRAF)

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My profile: <http://scholar.google.com/citations?hl=en&user=fC9L0ngAAAAJ>

**25 years 2003**

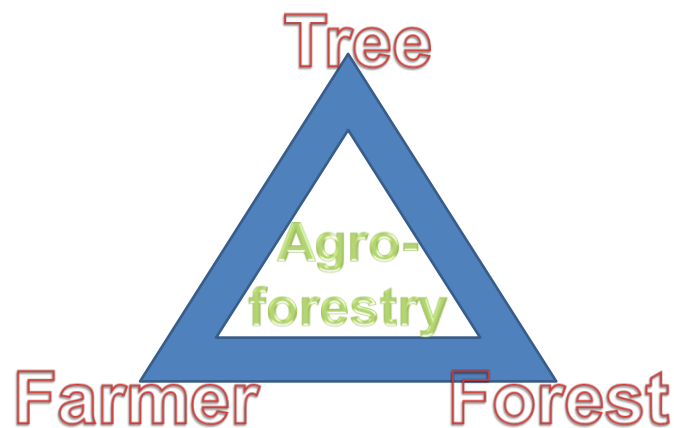
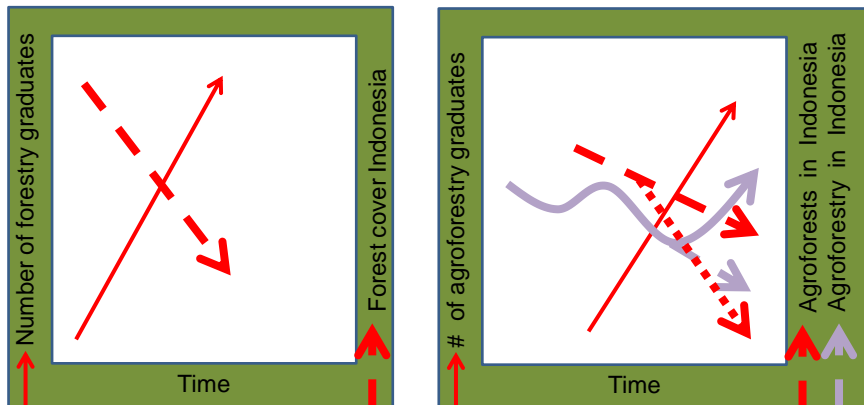






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Enough on the celebrations,  
what happened to Indonesia's  
forests, trees and agroforestry?



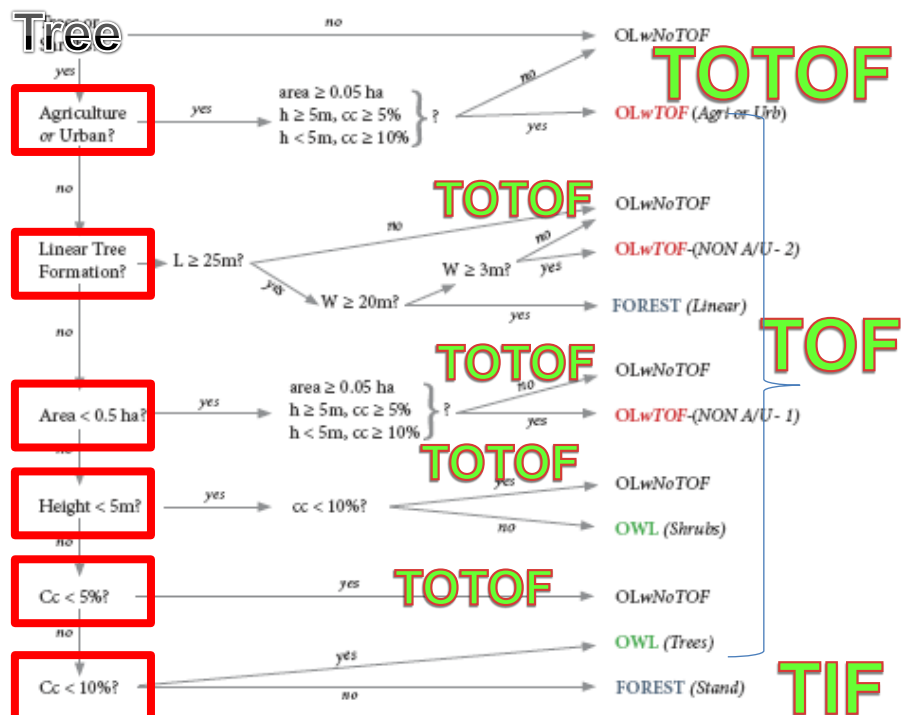
# TOWARDS THE ASSESSMENT OF TREES OUTSIDE FORESTS

A THEMATIC REPORT PREPARED IN THE FRAMEWORK OF  
THE GLOBAL FOREST RESOURCES ASSESSMENT

Hubert de Foresta, IRD  
Eduardo Somanriba, CATIE  
August Temu, ICRAF  
Désirée Boulanger  
Hélène Feuilly  
Michelle Gauthier, FAO

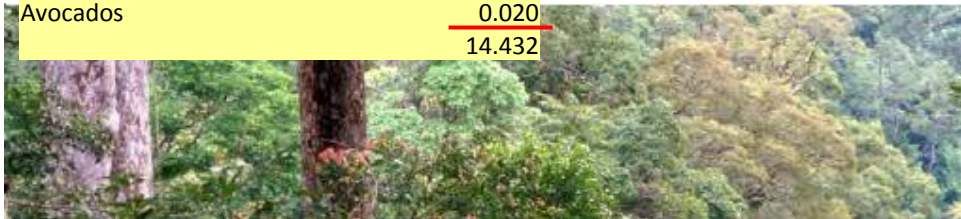


Rome 2013

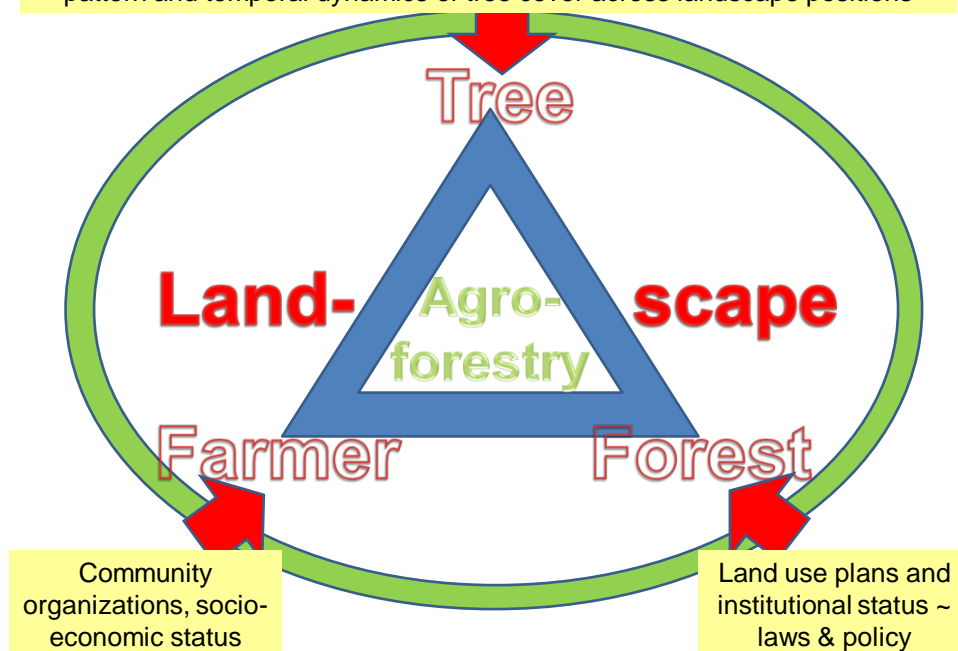


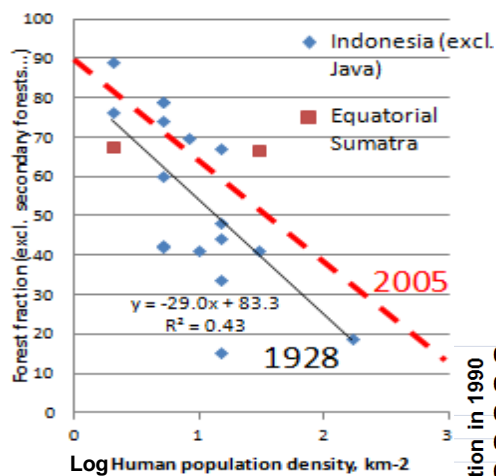
Oilpalm fruit	5.000
Coconuts	2.950
Natural rubber	2.898
Cocoa beans	0.990
Coffee	0.977
Cloves	0.312
Cashewnuts, with shell	0.308
Fruit,tropical	0.207
Mangoes,mangosteens, guavas	0.185
Kapok Fruit	0.133
Arecanuts	0.126
Tea	0.107
Cinnamon(canella)	0.081
Nutmeg, mace and cardamoms	0.075
Oranges	0.064
Avocados	0.020
	14.432

Agricultural “trees outside forest” in Indonesia, according to FAOSTAT: at least 9.4 + 5 Mha



Remote sensing + ground truthing information about quantity, quality, spatial pattern and temporal dynamics of tree cover across landscape positions



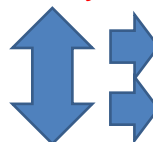


Environmental impact =

- Human population density \*
- Welfare
- Footprint/unit welfare

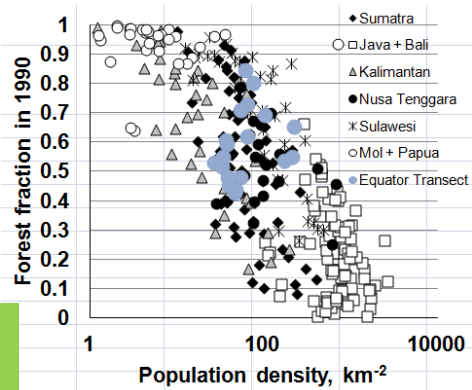
Sustainable development requires footprint to decrease faster than growth in population and welfare

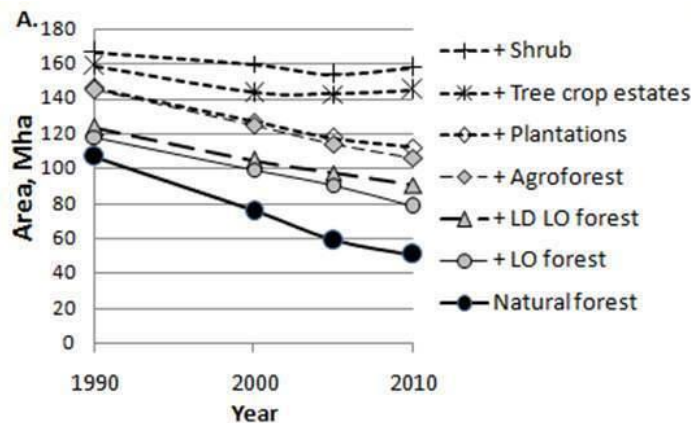
Large increase in human population density + average welfare



Substantial loss of forest cover  
Remarkable decrease in forest footprint

Almost same relationship between log(PopDens) and forest cover

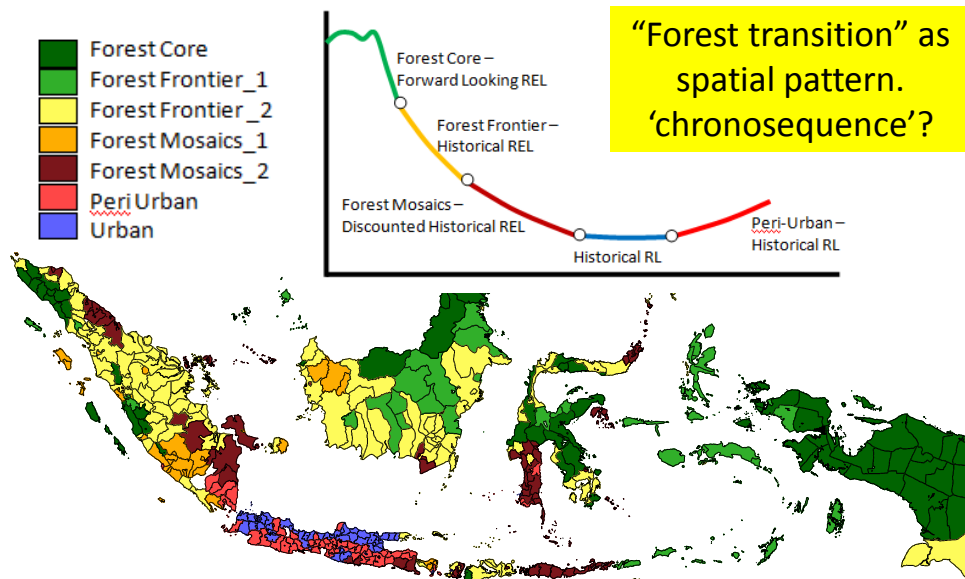




World Agroforestry Centre  
TRANSFORMING LIVES AND LANDSCAPES

**Stakeholder:**

1. Undisturbed natural forest ← Rainforest foundation
2. Undisturbed + sust. logged natural forest ← Conservation agency
3. Closed canopy undisturbed + logged forest
- 4A. as 3 + agroforest ← Forest ecologist
- 4B. as 3 + timber plantations ← Ministry of Forestry
- 4C. as 3 + agroforest + timber plant's + estate crops ← UNFCCC definition
- 4D as 4C + shrub ← Modis data

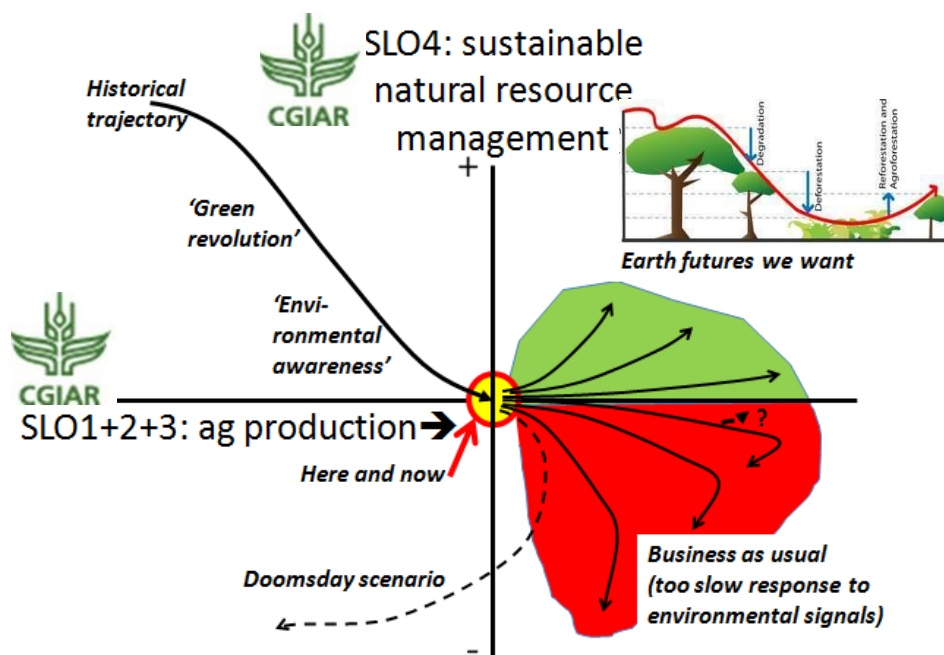


Spatial analysis: classification of 450 districts in Indonesia according to 7 tree cover transition stages (Dewi et al., in prep.)

19

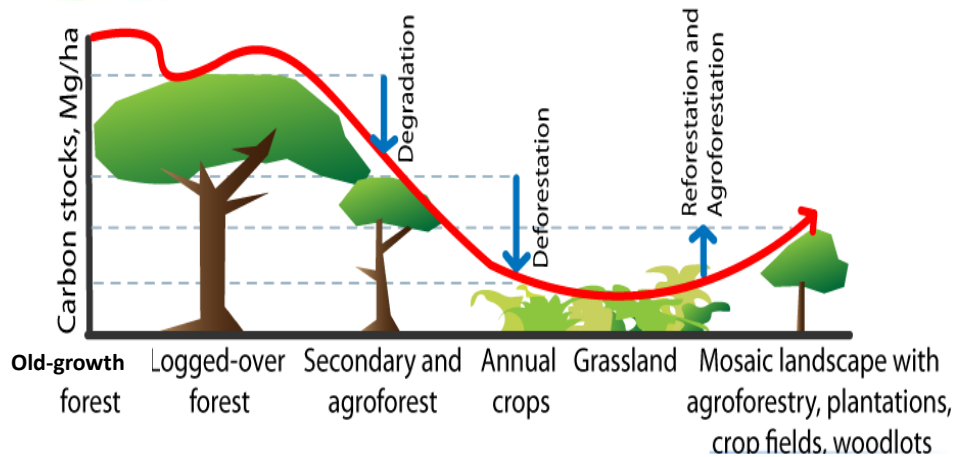
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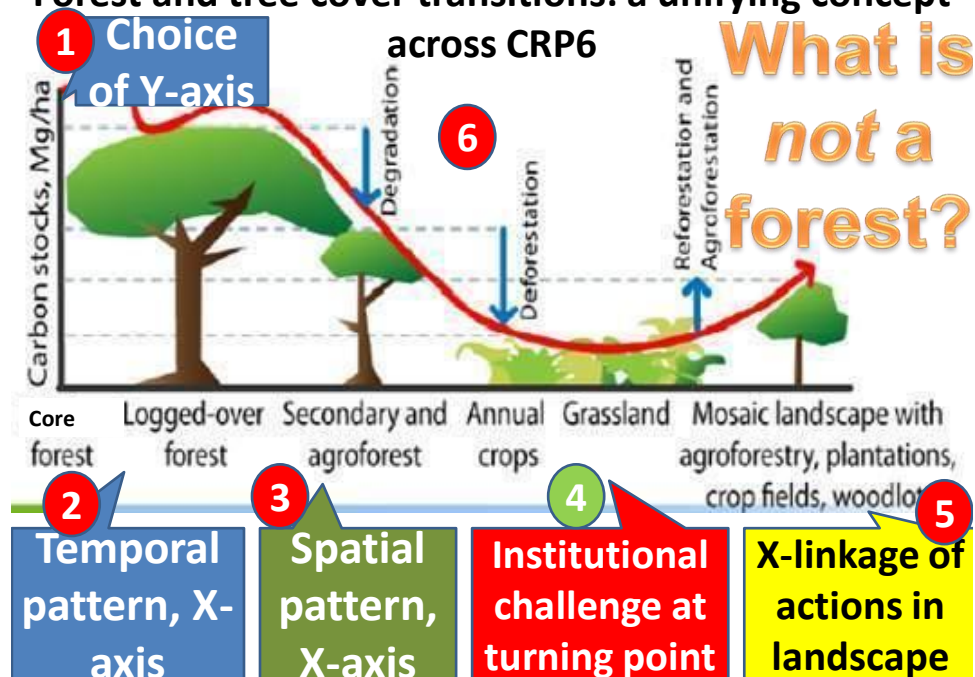


Tree cover transitions as unifying concept for livelihoods, landscape and governance aspects



<http://www.cifor.org/es/crp6/research-portfolio.html>

## Forest and tree cover transitions: a unifying concept across CRP6

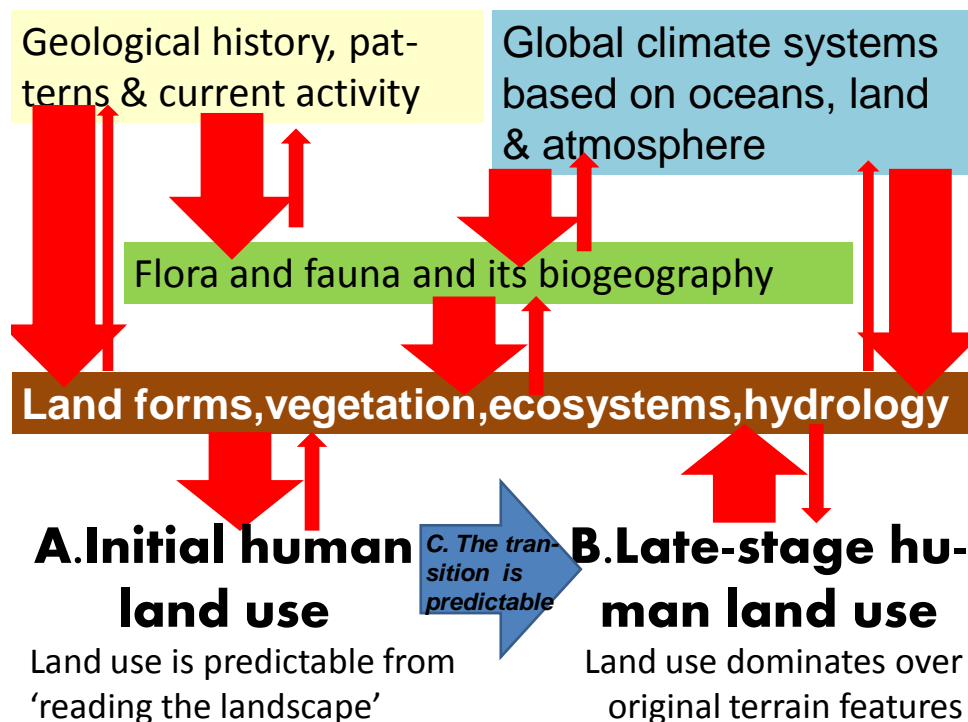


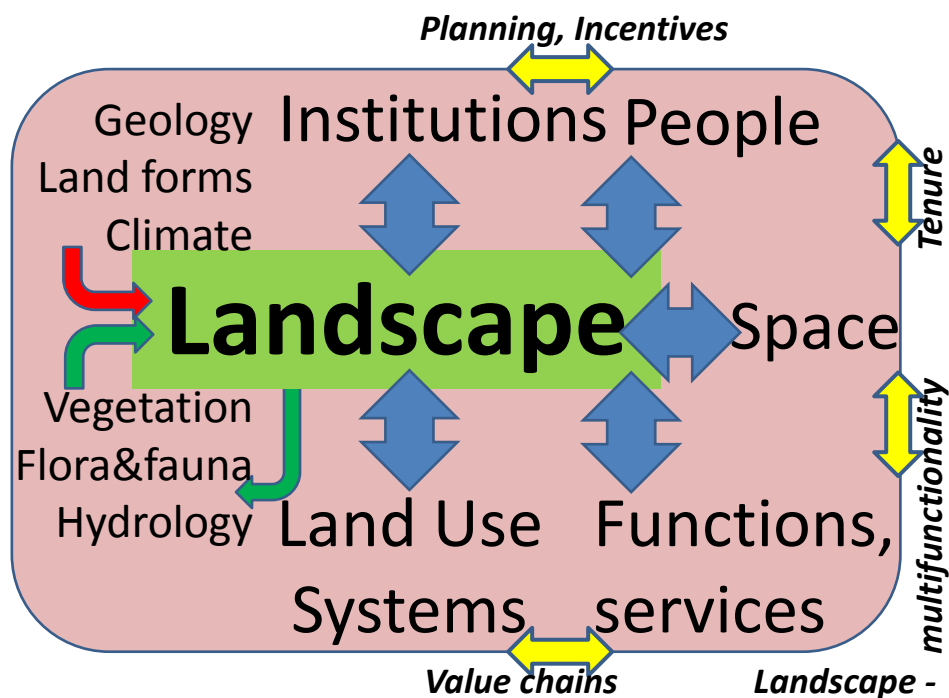


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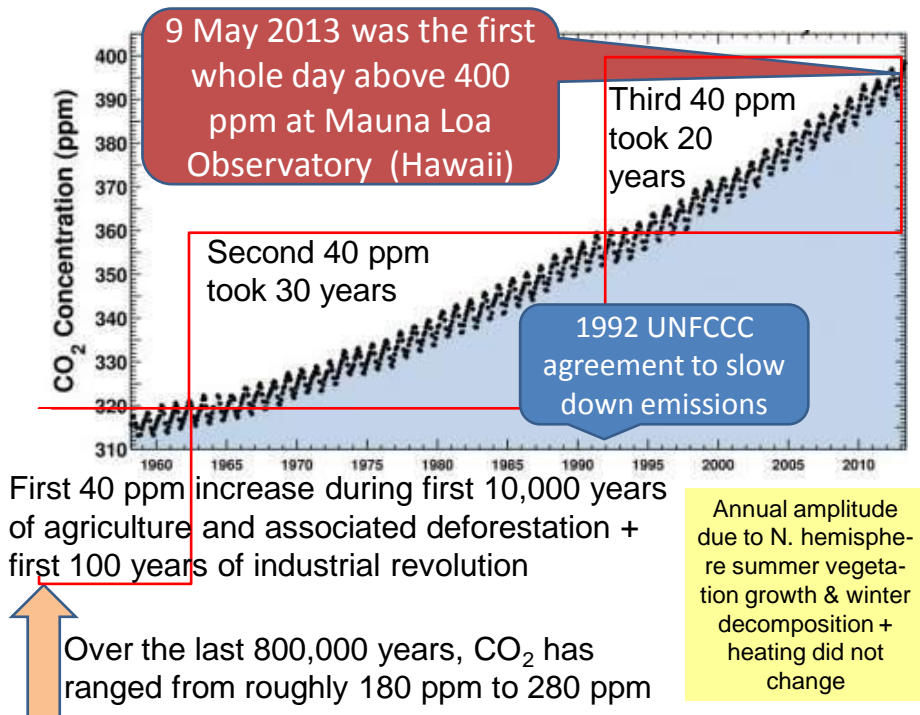
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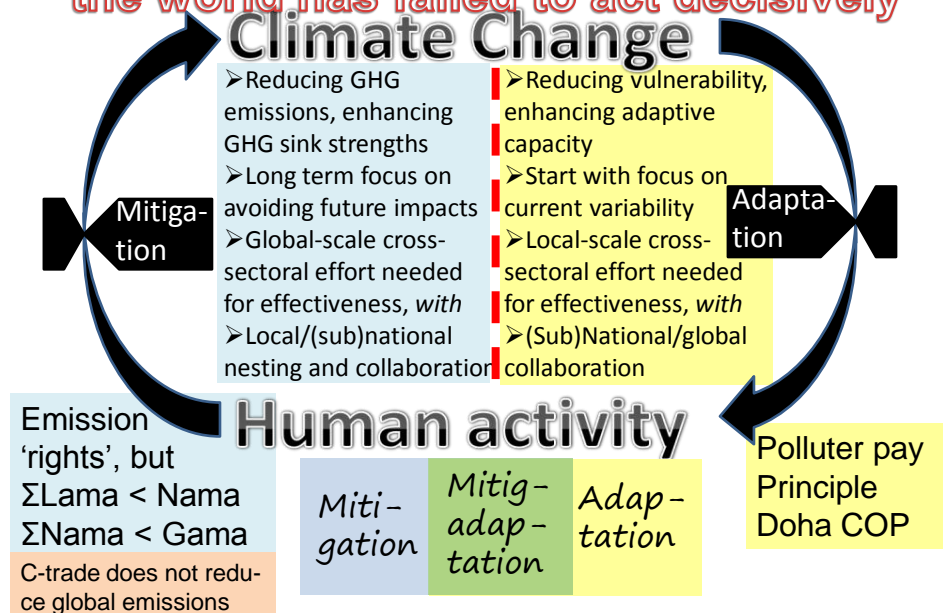


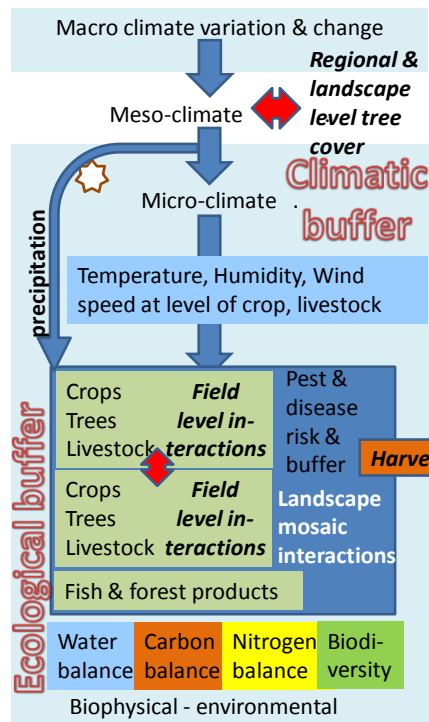
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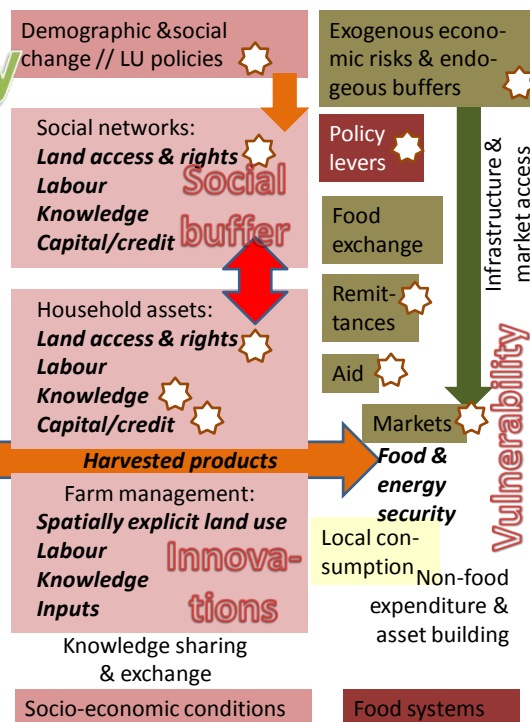
Despite 50 years of science and warnings,  
the world has failed to act decisively

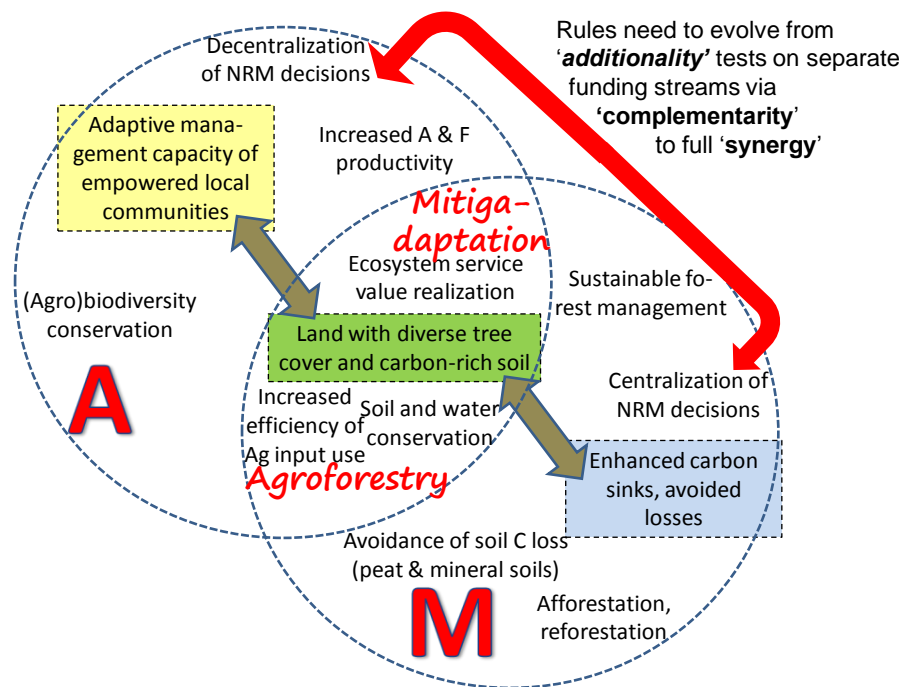
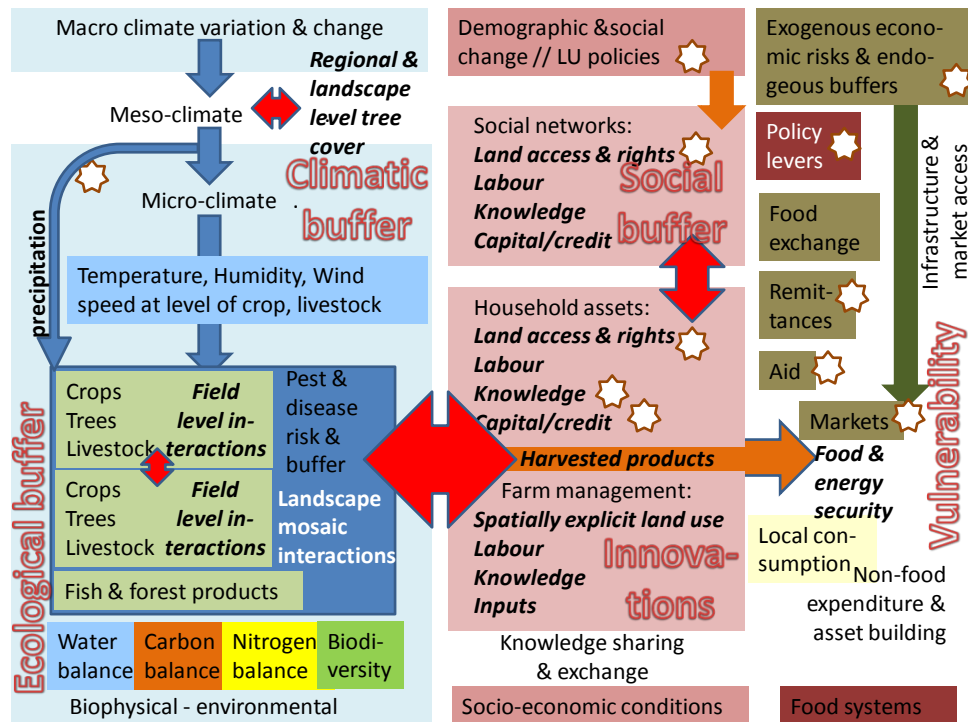




Agroforestry is an important part of ecological buffering

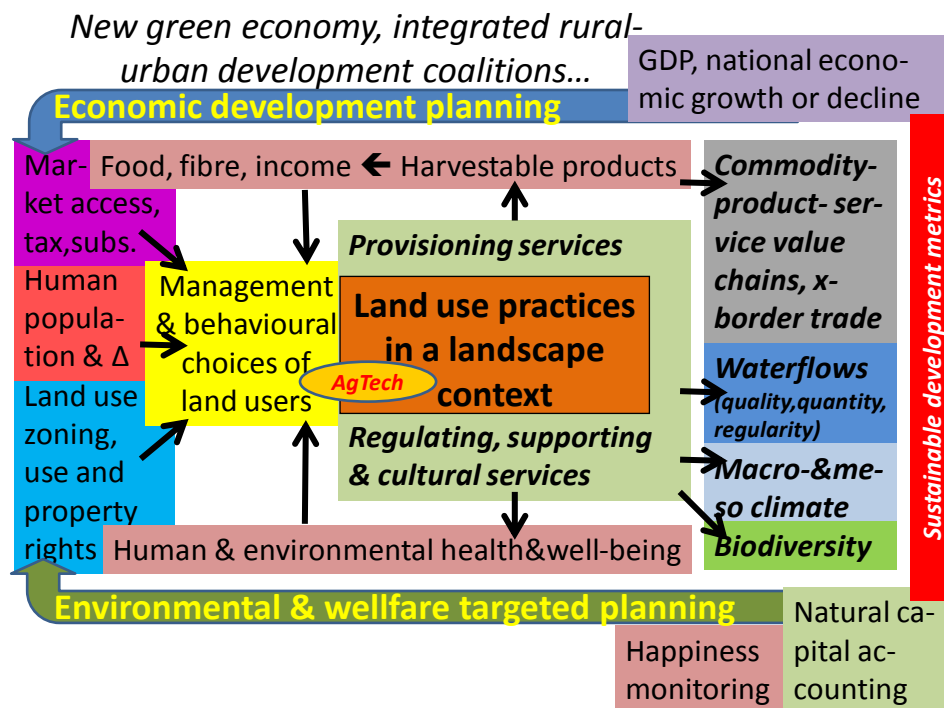
Agroforestry is an important part of socio-economic buffering





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## Conclusions & way forward

- We need good empirical evidence of **tree cover transitions** (quantity, quality, pattern) and their Ecosystem Service (**ES**) consequences
- We need a smooth institutional landscape interface between **Forests** and **People ~ ES** evidence
- **Climate change uncertainty + globalization** means an increased need for **buffering**
- **AF** can provide much of **the buffering needed**
- **Green Growth (7/42)** is feasible, but requires paradigm shift in ambitions

